

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 5-12 will be pending. By this amendment, claims 1-4 have been canceled; claim 5 has been amended; and claim 6-12 have been amended. No new matter has been added.

Objections to the Specification

In Section 1 of the Office Action, the title has been objected to. A new title has been proposed.

Accordingly, it is respectfully requested that this objection be withdrawn.

Objections to the Drawing

In Section 2 of the Office Action, Figure 7 has been objected to for failing to include a legend labeling the figure as "Prior Art". Figure 7 has been amended to include the "Prior Art" legend, obviating the objection.

Accordingly, it is respectfully requested that this objection be withdrawn.

§102 Rejection of Claim 1

In Section 4 of the Office Action, claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by Matthews *et al.* (U.S. Patent No. 5,671,098; hereinafter referred to as "Matthews"). Claim 1 has been canceled.

Amendments to the Drawings:

The attached sheet of drawing includes a change to FIG. 7. This sheet replaces the original sheet including FIG. 7. In Figure 7, a legend labeled "Prior Art" has been added.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

§103 Rejection of Claims 2-4

In Section 6 of the Office Action, claims 2-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matthews in view of Sakai *et al.* (U.S. Patent No. 4,656,533; hereinafter referred to as “Sakai”). Claims 2-4 have been canceled.

Accordingly, it is respectfully requested that this rejection be withdrawn.

Allowable Subject Matter of Claim 5

It is appreciatively noted that claim 5 would be allowable if rewritten in independent form including all of the limitations of the base claim and the intervening claim. Claim 5 has been rewritten in independent form.

Accordingly, it is submitted that claim 5 should now be allowable.

Newly-added Claims 6-12

Claims 6-12 have been added. Claim 6 is an independent device claim, and claim 10 is an independent method claim. Claims 7-9 depend from claim 6, and claims 11-12 depend from claim 10.

In the Background section of the Specification, it was disclosed that “[l]ately, in magnetic recording media, the signal level of the magnetic signal is rendered lower for raising the recording density. ... The magnetic reproducing device 2 is affected very sharply by the high-frequency high-energy electromagnetic noise. The high-frequency high-energy electromagnetic noise is transmitted via the magnetic head 30 to the signal processing circuit in the following stage. ... such noise causes deterioration of the SN ratio relative to the internal signal in the magnetic reproducing device 2. As a result, there arises a problem that, in the magnetic

reproducing device 2, some error may be generated at the time of detecting the magnetic signal from the magnetic recording medium.” *Background of the Specification, page 3, line 15 to page 4, line 7.*

“In order to solve the known problem mentioned above, it has been customary heretofore to enclose the magnetic reproducing device 2 with an electromagnetic noise prevention shield.

... However, the electromagnetic noise prevention shield needs to be composed of copper, aluminum or similar expensive material having a small electric resistance so as to cut off the high-frequency high-energy electromagnetic noise, hence bringing about another problem that the magnetic reproducing device is rendered expensive. ... Moreover, in using a removable disk such as a floppy disk, it is difficult to perfectly cut off the high-frequency high-energy electromagnetic noise because a disk insertion slot is not coverable.” *Background of the Specification, page 4, lines 8-11; page 4, line 22 to page 5, line 4; and page 5, lines 9-13.*

To solve this problem, embodiments of the present invention provide a magnetic memory device for reading and writing data from/to a disk-shaped magnetic recording medium having an inner portion and an outer portion.

For example, the structure of device claim 6 includes:

“a *magnetic head*, including a coil, for inductively detecting a signal from the magnetic recording medium;

an amplifier for amplifying the detected signal;

a characteristic filter for filtering the amplified signal, said characteristic filter configurable into one of a Chebyshev characteristic filter response configuration and a Butterworth characteristic filter response configuration,

wherein the configuration of the characteristic filter into one of the two filter response configurations adjusts resonant frequency of the magnetic memory device; and

a controller operating to configure the characteristic filter into one of the two filter response configurations corresponding to whether the magnetic head is detecting the signal from the inner portion or the outer portion of the disk-shaped magnetic recording medium.

(emphasis added)

Since it was determined that “the frequency - gain characteristic of the FDD with the additional capacitor 22 is such that the high-frequency gain obtained in the vicinity of the innermost portion is lower, approximately by 5 (dB), than the gain obtained in the vicinity of the outermost portion” (see Specification, page 16, lines 1-6), the embodiments of the present invention are configured to adjust the filter response according to “whether the magnetic head is detecting the signal from the inner portion or the outer portion of the disk-shaped magnetic recording medium.” (Claim 6)

“The Chebyshev characteristic filter has features of fast high frequency cut-off and sharp phase change. On the other hand, the Butterworth characteristic filter has features of slow high frequency cut-off and gentle phase change.” (see Specification, page 16, lines 16-20) Therefore, the magnetic memory device of claim 6 is configured so that “[t]he inner portion is filtered by a Chebyshev characteristic filter, while the outer portion is filtered by a Butterworth characteristic filter.” (see Specification, page 16, lines 6-9)

By contrast, although some of the cited prior art references mention setting an optimum resonant frequency to be approximately twice the “high” frequency (Matthews), these references fail to teach or suggest configuring the characteristic filter into one of two filter response configurations (Chebyshev and Butterworth) corresponding to whether the magnetic head is detecting the signal from the inner portion or the outer portion of the disk-shaped magnetic recording medium.

Based on the foregoing discussion, it is maintained that claim 6 should be allowable over

the cited prior art references. Furthermore, since independent claim 10 closely parallels, and includes substantially similar limitations as, independent claim 6, claim 10 should also be allowable over the cited prior art references. Since claims 7-9 depend from claim 6, and claims 11-12 depend from claim 10, claims 7-9 and 11-12 should also be allowable over the cited prior art references.

Further, the subject matter of newly-added claims 6-12 includes similar subject matter as the subject matter of allowable claim 5.

Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 5-12 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

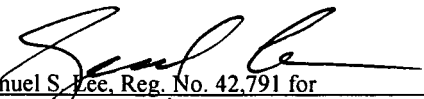
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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Attachments